



FONDAZIONE
SISTEMA TOSCANA



turismo.intoscana.it
Booking Online
XML Interface

Technical Specifications

February 15, 2011

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1. Introduction

1.1 Purpose

This document describes the XML Interface to the booking engine of turismo.intoscana.it, also referred to as the 'Booking Online system' in the text that follows.

1.2 Who should read this document

This document is meant for people who have technical experience of XML and programming in general. In detail it is recommended that developers have the following skills:

- Understanding of the core enabling technologies of XML, XML schema (Mandatory)
- Knowledge about other Internet technologies such as HTTP (Mandatory)
- Familiarity with OpenTravel Alliance (OTA) standards (Optional)

1.3 What is the XML Interface for?

The XML interface allows third parties to connect with the booking engine of turismo.intoscana.it in order to:

- Retrieve property availability and prices
- Update property availability and prices
- Retrieve a list of the property reservations that have been created/modified/cancelled within a certain time span

2. Open Travel Alliance Standards

The XML Interface described here follows the standards designed by the Open Travel Alliance (OTA, <http://www.opentravel.org/>).

The current definition of the XML Interface is based on version 2.000 (2006B).

This standard was developed by the OTA to make it easier for companies to implement Web Services and therefore to facilitate trade between companies. Refer to the web address above for more information on the OTA. The OTA standards cover almost all possible business cases for each type of request, so our implementation is inevitably a subset of the complete standard, and won't feature all possible combination of elements and requests provided for by the OTA standard.

This guide you are reading should be sufficient to create a set of requests that are compatible with our implementation of the OTA standards.

However, if you want to know more about the standards themselves, please visit the web address above.

3. Getting started

3.1 Registration

Using the web services of the XML Interface requires a partnership with Fondazione Sistema Toscana.

In order to establish that, you will first need to contact Fondazione Sistema Toscana to get a registration for the booking engine of turismo.intoscana.it. You will be assigned an ID code, a password and a test account.

It is advisable to start implementing the system on one your test properties (e.g. Hotel), and check the results against the property's back office in order to see whether your programming does the desired effect.

3.2 How requests are sent

You will be given an URL that will accept your XML requests with the HTTP POST request method.

3.3 Authentication

As the OTA does not restrict authentication methods, we use one of the standard OTA elements called "POS" element.

Requests authentication is composed of two elements:

- Third party authentication: the ID code and password obtained via registration (see above);
- Property authentication: the code of the property (e.g. Hotel or any "Struttura Ricettiva"), which always coincides with code assigned by Regione Toscana, and the password used to access the back office (extranet) of the Booking Online system.

Note that in the booking engine of turismo.intoscana.it, every account is assigned to one and only one property.

3.4 XML Messages Overview

The XML Interface here described support a subset of the OTA specifications. The supported subset includes the following message pairs:

- **OTA_HotelAvailRQ / OTA_HotelAvailRS**
This message pair are used to read current availability and prices of a property on the booking engine
- **OTA_HotelRateAmountNotifRQ / OTA_HotelRateAmountNotifRS**
This message pair are used to update availability and price of a property on the booking engine
- **OTA_ReadRQ / OTA_ResRetrieveRS**
This message pair are use to retrieve one or a list of reservation from the bboking engine

3.5 The OTA_HotelAvailRQ / OTA_HotelAvailRS messages

The OTA_HotelAvailRQ / OTA_HotelAvailRS messages are used to read current availability and prices of a property on the booking engine.

The following table shows the OTA_HotelAvailRQ elements and attributes:

Item	Data Type	Type	Description
Version	Decimal	Required	Version number for this message
StayDateRange	Xml Node	Optional	
Start	Date	Required	Date started for query, string format in yyyy-mm-dd
End	Date	Required	Date ended for query, string format in yyyy-mm-dd
RatePlanCandidate	Xml Node	Optional	
RatePlanCode	String(16)	Required	Booking Online rate plan code
RoomStayCandidate	Xml Node	Optional	
RoomTypeCode	String(16)	Required	Booking Online room type code

3.5.1 Use Case 1: retrieve a list of all property room type codes

This is an example request message:

```
<?xml version="1.0" encoding="UTF-8"?>
<OTA_HotelAvailRQ xmlns="http://www.opentravel.org/OTA/2003/05"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.opentravel.org/OTA/2003/05 OTA_HotelAvailRQ.xsd"
  Version="2.0" PrimaryLangID="it">
  <POS>
    <Source>
      <RequestorID Type="4" ID="CODE" MessagePassword="password" />
    </Source>
    <Source>
      <RequestorID Type="10" ID="property" MessagePassword="password" />
    </Source>
  </POS>
  <AvailRequestSegments>
    <AvailRequestSegment AvailReqType="Room" />
  </AvailRequestSegments>
</OTA_HotelAvailRQ>
```

The response message will be:

```
<?xml version="1.0" encoding="UTF-8"?>
<OTA_HotelAvailRS xmlns="http://www.opentravel.org/OTA/2003/05"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.opentravel.org/OTA/2003/05 OTA_HotelAvailRS.xsd"
  Version="2.0" PrimaryLangID="it">
  <Success/>
  <RoomStays>
    <RoomStay>
      <RoomTypes>
        <RoomType RoomTypeCode="SNG">
          <RoomDescription Name="Standard single room">
            <Text>Standard single room</Text>
          </RoomDescription>
        </RoomType>
        <RoomType RoomTypeCode="DBL">
          <RoomDescription Name="Standard double room">
            <Text>Standard double room</Text>
          </RoomDescription>
        </RoomType>
      </RoomTypes>
    </RoomStay>
  </RoomStays>
</OTA_HotelAvailRS>
```

```

        </RoomDescription>
      </RoomType>
    </RoomTypes>
  </RoomStays>
</RoomStays>
</OTA_HotelAvailRS>

```

3.5.2 Use Case 2: retrieve availability and prices of a room type¹

This is an example request message:

```

<?xml version="1.0" encoding="UTF-8"?>
<OTA_HotelAvailRQ xmlns="http://www.opentravel.org/OTA/2003/05"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.opentravel.org/OTA/2003/05 OTA_HotelAvailRQ.xsd"
  Version="2.0" PrimaryLangID="it">
  <POS>
    <Source>
      <RequestorID Type="4" ID="CODE" MessagePassword="password" />
    </Source>
    <Source>
      <RequestorID Type="10" ID="property" MessagePassword="password" />
    </Source>
  </POS>
  <AvailRequestSegments>
    <AvailRequestSegment>
      <HotelSearchCriteria>
        <Criterion>
          <StayDateRange Start="2008-02-23" End="2008-02-24" />
          <RatePlanCandidates>
            <RatePlanCandidate RatePlanCode="Code1" />
          </RatePlanCandidates>
          <RoomStayCandidates>
            <RoomStayCandidate RoomTypeCode="SNG" />
          </RoomStayCandidates>
        </Criterion>
      </HotelSearchCriteria>
    </AvailRequestSegment>
  </AvailRequestSegments>
</OTA_HotelAvailRQ>

```

The response message will be:

```

<?xml version="1.0" encoding="UTF-8"?>
<OTA_HotelAvailRS xmlns="http://www.opentravel.org/OTA/2003/05"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.opentravel.org/OTA/2003/05 OTA_HotelAvailRS.xsd"
  Version="2.0" PrimaryLangID="it">
  <Success />
  <RoomStays>
    <RoomStay>
      <RoomTypes>
        <RoomType RoomTypeCode="SNG" NumberOfUnits="2" />
      </RoomTypes>
      <RatePlans>
        <RatePlan RatePlanCode="Code1" RatePlanName="Name1" />
      </RatePlans>
      <RoomRates>
        <RoomRate>
          <Rates>
            <Rate MinLOS="3">
              <Base AmountAfterTax="80.00" CurrencyCode="EUR" />
            </Rate>
          </Rates>
        </RoomRate>
      </RoomRates>
      <TimeSpan Start="2008-02-23" End="2008-02-23" />
    </RoomStay>
    <RoomStay>
      <RoomTypes>
        <RoomType RoomTypeCode="SNG" NumberOfUnits="3" />
      </RoomTypes>
      <RatePlans>

```

¹ In the current version of the Booking Online system, only **RoomRate(s)** are supported.


```
<RatePlan RatePlanCode="Code1" RatePlanName="Name1"/>
</RatePlans>
<RoomRates>
  <RoomRate>
    <Rates>
      <Rate MinLOS="1">
        <Base AmountAfterTax="90.00" CurrencyCode="EUR" />
      </Rate>
    </Rates>
  </RoomRate>
</RoomRates>
<TimeSpan Start="2008-02-24" End="2008-02-24" />
</RoomStay>
</RoomStays>
</OTA_HotelAvailRS>
```

3.6 The OTA_HotelRateAmountNotifRQ / OTA_HotelRateAmountNotifRS messages

The OTA_HotelRateAmountNotifRQ /OTA_HotelRateAmountNotifRS messages are used to update availability and prices of a property on the booking engine.

The following table shows the OTA_HotelRateAmountNotifRQ elements and attributes:

Item	Data Type	Type	Description
Version	Decimal	Required	Version number for this message
RateAmountMessage	XML Node	Required	
StatusApplicationControl	XML Node	Required	
Start	Date	Required	Date started, format in yyyy-mm-dd
End	Date	Required	Date ended, format in yyyy-mm-dd
InvTypeCode	String(16)	Required	Booking Online type code
RatePlanCode ²	String(16)	Required	Booking Online rate plan code
IsRoom	Boolean	Required	Always “true”
Sun	Boolean	Optional	Allow change on Sunday
Mon	Boolean	Optional	Allow change on Monday
Tue	Boolean	Optional	Flags to indicate updating specific week days. By default, all weekdays are included.
Weds	Boolean	Optional	Flags to indicate updating specific week days. By default, all weekdays are included.
Thur	Boolean	Optional	Flags to indicate updating specific week days. By default, all weekdays are included.
Fri	Boolean	Optional	Flags to indicate updating specific week days. By default, all weekdays are included.
Sat	Boolean	Optional	Flags to indicate updating specific week days. By default, all weekdays are included.
Rate	XML Node	Required	
NumberOfUnits	Integer	Optional	Number of available units. This number will replace the current one in the system. Value must be between 0 and 99
MinLOS	Integer	Optional	Minimum night stay in day unit. If provided, value must be between 1 and 99.

² At present, the value of RatePlanCode attribute in an OTA_HotelRateAmountNotifRQ message is ignored by the Booking Online system. In all OTA_HotelRateAmountNotifRS messages from the system the RatePlanCode “DEFAULT” will be used.

BaseByGuestAmt	XML Node	Optional	
AmountAfterTax	Money	Required	Room rate amount
CurrencyCode	String(3)	Required	Required Currency code

This is an example update request message:

```
<?xml version="1.0" encoding="UTF-8"?>
<OTA_HotelRateAmountNotifRQ xmlns="http://www.opentravel.org/OTA/2003/05"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.opentravel.org/OTA/2003/05 OTA_HotelRateAmountNotifRQ.xsd"
  Version="2.0" PrimaryLangID="it">
  <POS>
    <Source>
      <RequestorID Type="4" ID="CODE" MessagePassword="password" />
    </Source>
    <Source>
      <RequestorID Type="10" ID="property" MessagePassword="password" />
    </Source>
  </POS>
  <RateAmountMessages>
    <RateAmountMessage>
      <StatusApplicationControl Start="2007-08-10"
        End="2007-08-15" InvTypeCode="SNG" RatePlanCode="BB" IsRoom="true"
        Sun="true" Mon="false" Tue="true" Weds="true" Thur="true" Fri="true"
        Sat="true" />
      <Rates>
        <Rate NumberOfUnits="2" MinLOS="1">
          <BaseByGuestAmts>
            <BaseByGuestAmt AmountAfterTax="80.00"
              CurrencyCode="EUR" />
          </BaseByGuestAmts>
        </Rate>
      </Rates>
    </RateAmountMessage>
  </RateAmountMessages>
</OTA_HotelRateAmountNotifRQ>
```

If the update is successful in the booking engine, you will receive a success message in replay.

The success response message will be:

```
<?xml version="1.0" encoding="UTF-8"?>
<OTA_HotelRateAmountNotifRS xmlns="http://www.opentravel.org/OTA/2003/05"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.opentravel.org/OTA/2003/05 OTA_HotelRateAmountNotifRS.xsd"
  Version="2.0" PrimaryLangID="it">
  <Success/>
</OTA_HotelRateAmountNotifRS>
```

Otherwise, in case of errors, the response message will be:

```
<?xml version="1.0" encoding="UTF-8"?>
<OTA_HotelRateAmountNotifRS xmlns="http://www.opentravel.org/OTA/2003/05"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.opentravel.org/OTA/2003/05 OTA_HotelRateAmountNotifRS.xsd"
  Version="2.0" PrimaryLangID="it">
  <Errors>
    <Error Type="10" Code="100" ShortText="ERROR DESCRIPTION" />
  </Errors>
</OTA_HotelRateAmountNotifRS>
```

3.7 The OTA_ReadRQ / OTA_ResRetrieveRS messages

This message is used either to retrieve data from the booking engine about one specific reservation or a list of reservations that occurred within a certain timespan.

Note that in both cases, the request is an **OTA_Read** message while the response is an **OTA_ResRetrieve** message.

The following table shows the **OTA_Read** elements and attributes:

Item	Data Type	Type	Description
Version	Decimal	Required	Version number for this message
UniqueID	Xml Node	Optional	
Type	Integer	Required	Value: 14 (Reservation)
ID	String(16)	Required	Booking Online reservation ID
ReservationTimeSpan	Xml Node	Optional	
Start	Date	Required	Date started for query, string format in yyyy-mm-dd
End	Date	Required	Date ended for query, string format in yyyy-mm-dd

3.7.1 Use Case 1: retrieve a specific property reservation

In this case the request is about a specific reservation, as identified via an ID:

```
<?xml version="1.0" encoding="UTF-8"?>
<OTA_ReadRQ xmlns="http://www.opentravel.org/OTA/2003/05"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.opentravel.org/OTA/2003/05 OTA_ReadRQ.xsd"
  Version="2.0" PrimaryLangID="it">
  <POS>
    <Source>
      <RequestorID Type="4" ID="CODE" MessagePassword="password" />
    </Source>
    <Source>
      <RequestorID Type="10" ID="property" MessagePassword="password" />
    </Source>
  </POS>
  <ReadRequests>
    <ReadRequest>
      <UniqueID Type="14" ID="249695" />
    </ReadRequest>
  </ReadRequests>
</OTA_ReadRQ>
```

3.7.2 Use Case 2: retrieve a list of reservations

In this case, the request is for a list of reservations which have been created, modified or cancelled within a certain timespan:

```
<?xml version="1.0" encoding="UTF-8"?>
<OTA_ReadRQ xmlns="http://www.opentravel.org/OTA/2003/05"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.opentravel.org/OTA/2003/05 OTA_ReadRQ.xsd"
  Version="2.0" PrimaryLangID="it">
  <POS>
    <Source>
      <RequestorID Type="4" ID="CODE" MessagePassword="FHDT password" />
    </Source>
    <Source>
      <RequestorID Type="10" ID="property" MessagePassword="password" />
    </Source>
  </POS>
  <ReadRequests>
    <HotelReadRequest>
      <Verification>
        <ReservationTimeSpan Start="2008-09-01" End="2008-09-06" />
      </Verification>
    </HotelReadRequest>
  </ReadRequests>
</OTA_ReadRQ>
```

3.7.3 Reservation retrieval message

In both cases, the Booking Online system will reply with the same type of response message, where the relevant information is:

- **ResStatus:** Reservation status. The possible values are: Initiate (New reservation), Modify (Modify existing reservation), Cancel (cancel of a reservation)
- **LastModifyDateTime:** the date time of the new, modified or cancelled reservation
- **ResID_Date:** the date of the reservation. If a reservation is modified or cancelled, the value is the same in all the messages
- **ResID_Value:** the booking number
- **RoomStayReservation:** always true
- **IsPerRoom:** always false

In all responses from the Booking Online system, reservation data will reflect the current status in the system, at the moment of the request.

This is an example of response message:

```
<?xml version="1.0" encoding="UTF-8"?>
<OTA_ResRetrieveRS xmlns="http://www.opentravel.org/OTA/2003/05"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.opentravel.org/OTA/2003/05 OTA_ResRetrieveRS.xsd"
  Version="2.0" PrimaryLangID="it">
  <Success />
  <ReservationsList>
    <HotelReservation LastModifyDateTime="2008-09-04T00:00:00"
      RoomStayReservation="true" ResStatus="Book">
      <RoomStays>
        <RoomStay>
          <RoomTypes>
            <RoomType RoomTypeCode="SNG" NumberOfUnits="1" IsRoom="true">
              <RoomDescription Name="Single mountain view" />
            </RoomType>
          </RoomTypes>
          <RoomRates>
            <RoomRate RoomTypeCode="SNG" NumberOfUnits="1"
              RatePlanCode="BB">

```

```

        <Rates>
            <Rate />
        </Rates>
        <Total AmountAfterTax="100.00" CurrencyCode="EUR"
            DecimalPlaces="0" />
    </RoomRate>
</RoomRates>
<GuestCounts IsPerRoom="false">
    <GuestCount Count="1" />
</GuestCounts>
<TimeSpan Start="2008-10-05" End="2008-10-07" />
<BasicPropertyInfo HotelCode="1234" />
</RoomStay>
<RoomStay>
    <RoomTypes>
        <RoomType RoomTypeCode="DBL" NumberOfUnits="1" IsRoom="true">
            <RoomDescription Name="Double mountain view" />
        </RoomType>
    </RoomTypes>
    <RoomRates>
        <RoomRate RoomTypeCode="DBL" NumberOfUnits="1"
            RatePlanCode="BB">
            <Rates>
                <Rate />
            </Rates>
            <Total AmountAfterTax="120.00" CurrencyCode="EUR"
                DecimalPlaces="0" />
        </RoomRate>
    </RoomRates>
    <GuestCounts IsPerRoom="false">
        <GuestCount Count="2" />
    </GuestCounts>
    <TimeSpan Start="2008-10-05" End="2008-10-07" />
    <BasicPropertyInfo HotelCode="1234" />
</RoomStay>
</RoomStays>
<ResGuests>
    <ResGuest>
        <Profiles>
            <ProfileInfo>
                <Profile>
                    <Customer>
                        <PersonName>
                            <GivenName>Lane</GivenName>
                            <Surname>Moe</Surname>
                        </PersonName>
                        <Telephone PhoneNumber="+39-999-7654321" />
                        <Email>Lane.Moe@abc.com</Email>
                        <Address>
                            <CityName>Florence</CityName>
                            <CountryName>Italy</CountryName>
                        </Address>
                    </Customer>
                </Profile>
            </ProfileInfo>
        </Profiles>
    </ResGuest>
</ResGuests>
<ResGlobalInfo>
    <GuestCounts IsPerRoom="false">
        <GuestCount Count="3" />
    </GuestCounts>
    <TimeSpan Start="2008-10-05" End="2008-10-07" />
    <Total AmountAfterTax="220.00" CurrencyCode="EUR"
        DecimalPlaces="0" />
    <HotelReservationIDs>
        <HotelReservationID ResID_Date="2008-09-04T00:00:00"
            ResID_Value="2756377" />
    </HotelReservationIDs>
</ResGlobalInfo>
</HotelReservation>
</ReservationsList>
</OTA_ResRetrieverS>

```

Note that in an **HotelReservation**, the **Total AmountAfterTax** in **ResGlobalInfo** may exceed the overall sum of **RoomRates** multiplied by **NumberOfUnits** and **TimeSpan**, since customers may have requested further options/services presented by the Booking Online system.

Please refer to the Booking Online extranet documentation for further information.